

Fractional Linear Transform (FLT)

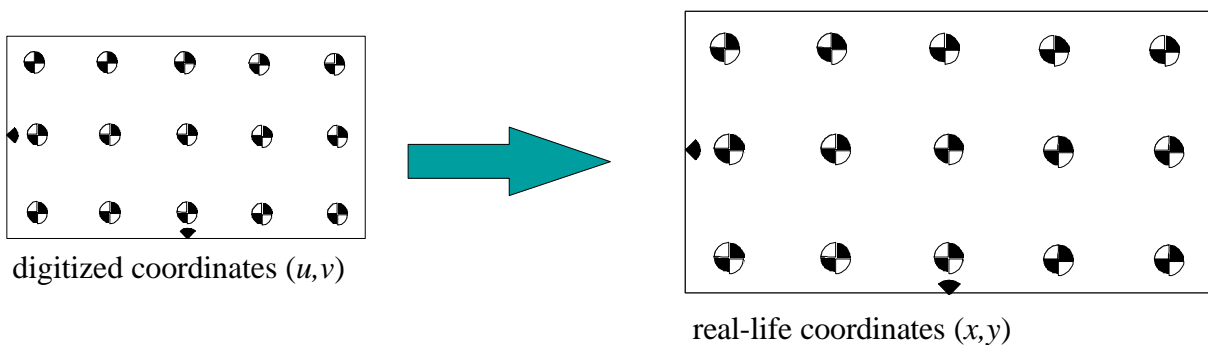
The FLT is a means of scaling or “refining” two-dimensional data. Its 3-D equivalent is the Direct Linear Transform (DLT).

$$x = \frac{c_1u + c_2v + c_3}{1 + c_7u + c_8v}$$

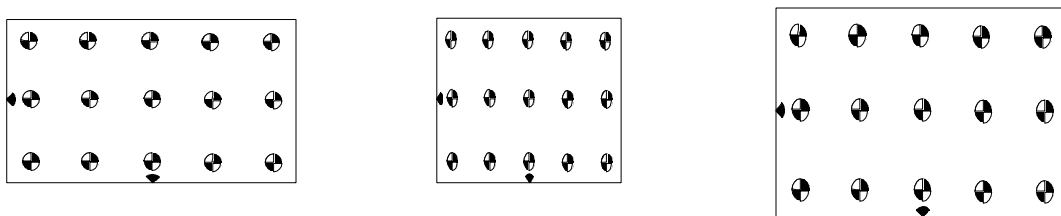
$$y = \frac{c_4u + c_5v + c_6}{1 + c_7u + c_8v}$$

where c_1 to c_8 are the FLT coefficients, (u, v) are the digitized coordinates and (x, y) are the transformed (refined) coordinates

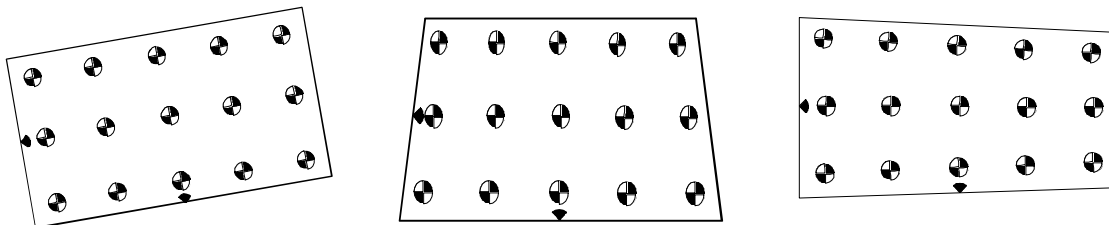
- permits scaling from digitizer units to real units



- permits differential scaling in X and Y directions



- removes rotations about all three axes or any combination



- cannot remove angular distortions (pin cushion or barrel)